

FEATURE ARTICLE II



DECISION MAKING AND MARKET CRISES[©]

BY TIM KELLY

When we attempt to understand past events, we implicitly test the hypotheses or rules we use both to interpret and to anticipate the world around us. If, in hindsight, we systematically underestimate the surprises that the past held and holds for us, we are subjecting those hypotheses to inordinately weak tests and, presumably, finding little reason to change them. Fischhoff (1982)

Throughout history humans have repeatedly fallen short of “cognitive perfection,” i.e., being totally rational and efficient, when making decisions in a state of complex uncertainty. But to speak of “perfection” as if it were an attainable goal might be a stretch in any event. Quite frankly, humans are naturally rather poor at making rational and efficient decisions or coming anywhere close to cognitive perfection on a constant basis as studies in the area of behavioral finance continue to affirm and explore.

As finance professionals, while we might hope we are better at cognitive processes than the population at large, we unfortunately exhibit the same shortcomings as others when it comes to making decisions in complex settings. The difference is that our decision errors as a group mirror quite eerily mistakes that have occurred time and time before in the market. The common thread in this series of events should be obvious: the Tulip Bulb Mania of the 1600s, the South Sea Bubble in the early 1700s, the original Ponzi

Scheme of the early 1900s, the 1980s Japanese Real Estate Bubble, the 1990s Dot Com Internet Bubble, Long-Term Capital Management, the Subprime Mortgage Crisis, and, most recently, the Bernard Madoff estimated \$50 billion meltdown. Whether it is mass hysteria, the lemming effect, crowd delusion, or something else, our collective errors in judgment and improper application of proven risk mitigating techniques when it comes to seeing market crises forming begs the question: with so many lessons over time, why doesn't our industry seem to get any better at spotting and protecting against developing bubbles? The answer is rooted in human nature, the complex human psyche, and the myriad of mental shortcuts that we naturally employ when faced with decisions in uncertainty called *heuristics*.

Heuristics, or rules of thumb as they are sometimes called, are the unconscious routines or shortcuts that we utilize when faced with complex decisions. They reflect the outcome of prior trial-and-error experiences, evolution, cognitive development, and

the assimilation of data learned across a host of “feedback loops” resulting from a plethora of behavioral experiences. They are the little things we have come to learn somehow that help us fill the voids of absolute knowledge when we are faced with a new situation or the need to make a decision under conditions of complex uncertainty.

For example, if the route you take to the train each and every morning is suddenly closed due to an accident, the unconscious thought process that causes you to turn at certain alternative intersections in an effort to forge a new path to the train is called heuristics. When you need a certain bolt to fix your child’s bicycle, the manner in which you narrow the scope of which ones you grab from the drawer of possible fixes is the unconscious display of heuristics in action. The problem arises with heuristics when they expose the decision process to biases that can fatally taint the outcome of the decision being made.

Who knows? The study of decision making is not how to make the *right* decisions but how to insure that you are making the *best* decisions as defined by the most rational, objective, and well informed ones possible.

So how then do we improve to “best” our decision processes? First, by staying constantly aware of the common errors we make when utilizing heuristics or decision shortcuts. By better understanding the common biases and structural errors imbedded in one’s judgmental heuristics, we can better guard against them negatively impacting our decisions – or we can at least improve the clarity of the process underlying the decisions we make. The common errors in our decision processes are most frequently referred to as “cognitive biases” or “mental traps” and fall into one of several key categories. In this article we discuss three such biases that many times compromise our decision making effectiveness.

<u>TYPE</u>	<u>DEFINITION</u>	<u>WAYS TO AVOID</u>
<u>Representative Bias</u>	Where commonality between objects of similar appearance or between an object and an apparently related group is assumed.	<ul style="list-style-type: none"> ▶ Ask: what is it that you think you see or know that may not be so? ▶ Trust your instincts but avoid overconfidence.
<u>Anchoring Bias</u>	Weighing disproportionately the first information received or the information that’s received in the largest volume.	<ul style="list-style-type: none"> ▶ Use alternative starting points or approaches other than your normal style. ▶ Seek additional challenging data. ▶ Tell others only the necessary minimum when requesting their input. ▶ Before negotiating, think through your proposal so as to not fixate on others.
<u>Acceptance Bias</u>	The natural tendency of humans wanting to be liked and accepted.	<ul style="list-style-type: none"> ▶ Research the facts yourself. ▶ Seek the advice of disinterested parties. ▶ Encourage independently researched opinions, risk taking, and contrarian thinking in groups.

For instance, you are asked to complete the following sequence of numbers: 2, 4, 6, [x]. One heuristical approach may be to interpret the trend as merely increasing each prior number by a constant, in this case 2, so that x equals 8. Another plausible heuristical approach may be to interpret the trend as an additive sequence whereby the first number is added to itself ($2 + 2 = 4$), the resulting number then is added to the prior, and so on. In this manner, x would equal 10. So which one is right?

Representative Bias and Overconfidence
 Drawing analogies between multiple situations is a common human trait. In our industry, how often do we hear someone say: “Yeah, I saw that deal but I lost a load of money in one similar to it years ago so it’s not really my cup of tea.” Content that the proverbial bullet has been dodged by investment decision-making prowess, the person probably feels good about the quick witted deal assessment kill. However, what appeared to be a deal perfectly analogous to a prior loss really was not all that

similar. Not until later when a competitor makes huge profits on the same deal is the bias exposed.

Superficial resemblances are a frequent pitfall for investors, especially seasoned ones, because of a related judgment error: overconfidence. As we get more experienced, we tend to discount the fact that we are using a variety of cognitive shortcuts to speed our decision processes. But whether our *belief* that situation x is identical to situation y is truly accurate depends largely not only on what we *know*, but what we *do not know* as well.

Like a trained fighter pilot, we must learn to trust our gauges; but, what will ultimately save us from a deadly crash and burn is being smart enough to question what we *think* we see or *think* we know... but may or do not. Questioning your judgmental instincts, by asking yourself what is it that you *think* you know about a given situation but may not, is one way to guard against overconfidence and representative bias.

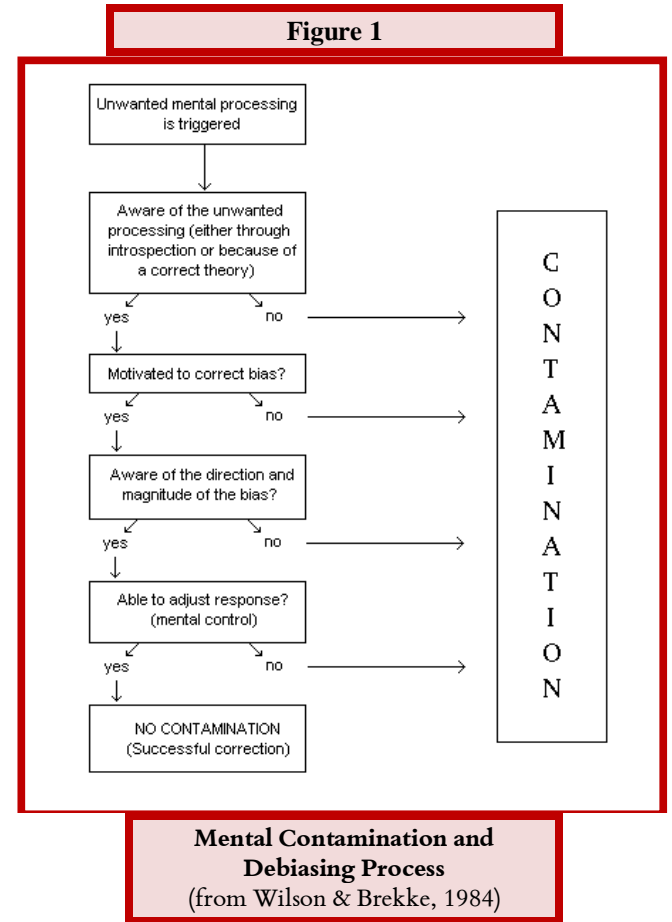
Some of the best investment firms in the market, as measured by consistent above average realized returns, repeatedly display a talent for proactively targeting strategies that they deem ripe for exploitation. But, they also display the equally important characteristics of open, inquisitive, challenging dialogue among the firm's members in order to constantly test their theories and beliefs. Trust what you know, trust what you think you know, but confirm both by assuming in both cases you may be wrong. Avoiding overconfidence is a major underpinning to being a successful professional. As the old adage goes... the greatest fool is he who thinks himself not one!

Anchoring Bias

The human mind tends to disproportionately weigh the first information it receives or the information that it has stored in greater volume and which is easiest to recall. For example, in what is also known as *visibility bias* (akin to anchoring), if you were asked if more people die from heart attacks or traffic accidents, studies have shown that the average person tends to favor car accidents as the preferred answer—even though it is wrong!

The reason for this common decision error is because our mind over weights the vastly more recently viewed and probably greater amounts of media coverage concerning car accident fatalities than it does media coverage of heart attack victims. The gory pictures of collided and twisted cars with ambulances surrounding the scene are sadly rated as better newspaper pictures than a person dying of

heart failure. Hence, your mind recalls the former scenes more readily versus the latter and serves up the wrong dataset to help you answer which situation generates the most fatalities.



Anchors come in many forms. They can be initial questions, untested estimates offered as a guess early in a conversation, a colleague's question, or even a statistic seen in that morning's *Wall Street Journal*. Our mind tends to give a lot of importance to things that we may not even be conscious of in the same way that stereotypes creep into our psyche whether we like it or not. The trick is to recognize when we are anchoring our thoughts or relying on data that our mind says is valid and on point, but in retrospect, we determine could be faulty or in need of further exploration.

In addition to the general process of debiasing illustrated in Figure 1, other ways to fight the anchoring bias include:

- Ø Using alternative starting points and approaches rather than sticking with the first line of thought or action that occurs to you.

- Ø Seek additional information and opinions from a variety of people to widen your frame of reference; seek out people that will challenge your line of reasoning.
- Ø When you solicit information or input from others, tell them as little as possible about your own ideas, estimates, and tentative decisions on the subject at hand so that you don't taint them in a similar fashion.
- Ø In negotiating, think through your position before any negotiations begin so as to avoid being anchored by the other party's initial proposal or line of reasoning.

Whoever most vividly characterizes the situation in question usually can preemptively anchor other's perceptions of the subject and thereby establish—at least initially—the direction that the discussion will usually take until the other parties catch on to their anchoring bias.



Acceptance Bias

Humans have an innate trait of wanting to be liked and accepted by others. This fundamental aspect of our species makes social order the norm and dysfunctional or antisocial behavior the aberration. However, this trait also provides several pitfalls to making effective decisions.

Given our burning unconscious desire to be accepted, humans tend to prefer the status quo. Instinctively, staying with what we know is less risky than venturing into the unknown, especially alone. We tend to protect our egos and to avoid the risk of criticism, which is a critical feature of what con artists focus on when trying to take advantage of a mark. Examples of the acceptance bias plaguing the human psyche is represented in each of the prior market bubbles and well known scams.

It's quite embarrassing to be the contrarian when all of your friends and associates around you are

making money rather easily. It's hard to buck the trend and to stand alone on your morals or predictions when even your most dim witted critic is proving you wrong. "Buy dot com stocks... we're all making a fortune...who cares what 'eye ball' valuations really mean in the end!" Similarly, it's also hard not to seek the relationship of someone that all of your friends praise and admire.

When someone is labeled as brilliant, honest, a key figure within the community, someone that doesn't shoot for the fence in terms of spectacular performance but promises only modest returns, how can you not take a serious closer look? Think of the number of people that fell victim to this very acceptance bias when they listened to their friends extol Bernard Madoff's virtues and blindly invested without even a scintilla of due diligence. In every one of the prior market bubbles or publicized scams, rampant was the urge to be as smart as our peers. As professionals, how does this happen? Because, quite frankly, as humans we like to be liked!

Some easy ways of defending against this decision process fault are the following suggestions. First, never, ever, rely on someone else's interpretation of the facts in an important decision. Research the facts yourself and guard against letting other's opinions anchor your decision in a misguided way. As Ronald Reagan used to say: "Trust, but verify." Being a contrarian for sound reasons should never be as embarrassing as being a lemming for no reason.

Another way to protect against the acceptance bias is to seek the advice of other's uninformed in the matters at hand that have credible data or insights to aid you in your decision. Because they are disinterested third-parties to the matter, you needn't worry about hidden biases affecting their judgment and therefore yours.

Third, within an enterprise-wide culture, cultivate a "failure is ok" type culture versus a "failure-fearing" culture. If you work within a culture that frowns on risk taking and/or failure naturally associated with risk, it's hard to be a contrarian. In such cultures, status quo is king! If you want the most well reasoned decisions, encourage personal risk taking and contrarian thinking meant to test and to challenge hypotheses. But, require everyone to come prepared to the decision discussion. Safety in numbers without credible evidence to support your position, no matter how widely held, should be forbidden.

History of Decision Making and Heuristics

The field of decision making and the identification of these heuristics dates back into the early 1970s when such pioneers as Daniel Kahneman and Amos Tversky studied the field. Their results earned them a Nobel Prize.

Additional research has continued on to the present day with notable contributions being made by Samuel D. Bond, Sean D. Campbell, Kurt A. Carlson, John S. Hammond, Ralph L. Keeny, Margaret G. Meloy, Howard Raiffa, J. Edward Russo, Paul J.H. Schoemaker, Steven A. Sharpe, Cass R. Sunstein, Robin J. Tanner, and Richard H. Thaler—just to name a few.

Despite all this research, financial decision making continues to remain affected by cognitive errors. In addition to all the manias, bubbles, and meltdowns already mentioned, Sean D. Campbell and Steven A. Sharpe in a recent paper noted how “expert consensus forecasts of monthly economic releases from Money Market Services surveys from 1990-2006 have a tendency to be systematically biased toward the value of previous months’ data releases.” John Nofsinger, Ph.D., in his July 21, 2008 *Mind on My Money* blog points out three more examples:

- “Earnings forecasts by financial analysts are biased towards the previous months’ data as an anchor.”
- Issuers of initial public offerings (IPOs) tend to anchor to the midpoint of the initially filed pricing range, causing them to potentially miss new information during the process, which results in them underpricing IPOs.
- The purchase price of a stock has a strong anchoring effect, impacting assessment of the stock’s performance and leading to selling winners too soon and losers too late.

Paul J.H. Schoemaker, Ph.D. and Executive Chairman of Decision Strategies International, Inc., has charted data showing “that, continuing a trend of many decades, we shall experience increased volatility in our business and financial environments.” His research shows that managers often overreact to surface changes—such as a drop in interest rates—but under-react to more essential overall system changes.

Given the changes that the global financial system has recently undergone and is likely to continue undergoing in a massive manner, utilizing all of the latest decision-enhancing tools such as scenario

planning, adaptive strategies, and dynamic monitoring systems should be considered.

However, being aware of the basics long known to be information distorters and continually improving organizational and personal agility in decontaminating these biases is even more essential.

The Future

If we as finance professionals focus on minimizing our natural human tendencies to let the acceptance bias, the anchoring bias, the representative bias, and other data distorting tendencies creep into our behaviors, perhaps the next financial bubble in the making can be popped before it grows.

One of the best ways that we can make better decisions is to acknowledge and accept our biases before progressing down a path to a decision. Do we harbor prior negative experiences that might cloud our objectivity? Openly admit it. Let others know you have that bias and will work to overcome it by staying objective. Or, if you have a strong opinion on a matter based on data that you have seen, test to make sure you are not acting on a visibility or anchoring bias that could affect your judgment.

Guard against overconfidence at all times. It’s good to know, but better to admit when you aren’t sure or flat out do not know. Confidence is good and high degrees of confidence are fine; but, overconfidence, like skiing well beyond your skill limits, can be very dangerous for you and others around you! The best decision makers are the ones who accept mistakes and constantly try to learn from them to feed improved decision methods in the future. If you want better decisions, focus on building better decision processes.

About the Author



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